

What is claimed is:

—

1. A motor stator assembly comprising:  
a plurality of yokes fabricated by laminating a plurality of steel sheets  
5 having a predetermined length; and  
a plurality of poles engaged between the yokes and formed by molding magnetic material in a mold, on which coil is wound.
2. The assembly of claim 1, wherein the pole comprises:  
10 a guide part having a circular arc shape, for collecting magnetic flux;  
a winding part connected to a rear surface of the guide part, on which coil is wound; and  
a connecting part formed at a rear surface of the winding part and connected to the yoke.
- 15 3. The assembly of claim 1, wherein the pole is formed of iron powder.
4. The assembly of claim 1, wherein an insulator is attached to inside  
20 of the winding part on which coil is wound and the pole for insulating the pole from the coil.
5. The assembly of claim 1, wherein nonconductive material is molded at an inner side of the winding part on which coil is wound and the pole for  
25 insulating the pole from the coil.

6. The assembly of claim 5, wherein the nonconductive material is epoxy.

7. The assembly of claim 2, wherein the guide part has an inner surface of a circular arc shape, for collecting magnetic flux to a rotor by guiding the rotor.

8. The assembly of claim 2, wherein a height and a length of the winding part are smaller than those of the guide part in order to prevent the coil from being protruded out of the guide part when the coil is wound on the winding part and in order to wound the coil several times, and an outer circumference surface of the winding part is formed concavely so that the coil can be wound thereon.

9. The assembly of claim 2, wherein an edge formed at an outer circumference surface of the winding part is formed as a curved line in order to prevent coating of the coil from falling off when the coil is wound.

10. The assembly of claim 2, wherein the connecting part has a circular arc shape and is formed of a plate having a constant height and a width.

11. The assembly of claim 10, wherein the yoke is engaged between two different connecting parts and formed in accordance with that a plurality of yoke plates having a constant curvature radius therein are laminated as a height of the connecting part.

12. The assembly of claim 11, wherein a connecting projection and a connecting groove for engaging the yoke and the connecting part are formed with the same height as the yoke and the connecting part.

5 13. The assembly of claim 11, wherein the connecting projection of the yoke is protruded as a rectangular shape and engaged to the connecting groove having a rectangular groove of the connecting part in order to prevent the yoke from being separated from the connecting part.

10 14. The assembly of claim 11, wherein the connecting projection of the yoke is protruded as a trapezoid shape and engaged to the connecting groove having a corresponding trapezoid groove of the connecting part.

15 15. The assembly of claim 11, wherein the connecting projection of the yoke is protruded long with two same stopping jaws at both sides thereof, and engaged to a stopping groove having a groove of a corresponding shape to the connecting part in order to prevent the yoke from being separated from the connecting part.

20 16. The assembly of claim 1, wherein a step projection of a rectangular shape is formed at both ends of the yoke and engaged to a step projection formed at both ends of the connecting part with a corresponding rectangular shape.

25 17. The assembly of claim 1, wherein the yoke has a constant inclined

surface at both ends thereof and a corresponding inclined surface is also formed at both ends of the connecting part, so that the yoke is engaged to the connecting part.

5           18.     A manufacturing method of a motor stator assembly comprising the steps of:

              a first step of forming a plurality of yoke plates by blanking steel plate of a predetermined shape;

              a second step of forming a yoke by laminating the yoke plates with a  
10     predetermined height;

              a third step of forming a predetermined frame by installing the laminated yoke into a mold;

              a fourth step of filling magnetic powder material in an empty space of the mold;

15           a fifth step of forming a pole engaged to the yoke by applying a predetermined pressure and heat to the filled magnetic powder material; and

              a sixth step of removing the mold and then winding coil to the pole.

\_\_\_\_\_ 19.     The method of claim 18, wherein the yoke plates are formed by  
20     blanking the steel plate having a predetermined length and a width at a time in the first step.

              20.     The method of claim 18, wherein the pole is formed in accordance with that the magnetic powder material is pressed and then cured with 300~500°C  
25     thus to be combined one another in the fifth step.

21. The method of claim 18, wherein an insulator is attached to a contacted part between the pole and the coil, or insulating material is molded and attached thereto in order to wind the coil on the pole.

5

17